

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application. An identifier indicating the status of each claim is provided.

Listing of Claims

1-6. (Canceled)

7. (Currently Amended) An information transmission apparatus for transmitting information through a first transmission path, comprising:

- a switching circuit having a first terminal and a second terminal;
- memory means having a first memory section and a second memory section for storing a NIT table of a transmission path, the first memory section and the second memory section being coupled with the first terminal and the second terminal respectively;
- receiving means for receiving a broadcasting signal from a second transmission path;
- demodulation means for demodulating the signal received by the receiving means;
- and
- modulation means for modulating the signal demodulated by the demodulation means,

wherein when the second transmission path includes services of a plurality of satellites belonging to different networks, network information of the different networks is stored in different locations in the memory means,

wherein a table indicating physical information of a transmission path is contained in the broadcasting signal and is distinguished by a unique table ID,

wherein the table is segmented into a plurality of sections with a same format, each section having a section indicator and a last section indicator,

wherein the modulation means includes network information replacement means for replacing network information demodulated by the demodulation means with information for the first transmission path,

wherein the information for the first transmission path includes a first delivery system descriptor and the network information includes a second delivery system descriptor,

wherein said first delivery system descriptor length and said second delivery system descriptor length are set in accordance with a transport stream descriptor length,

wherein NIT tables of transport streams are alternately stored in the first memory section and the second memory section~~the first memory section is utilized for the first transmission path and the second memory section is utilized for the second transmission path,~~

wherein the switching circuit alternately outputs the NIT table stored the first memory section and the second memory section every transport packet by switching between the first terminal and the second terminal,

wherein service identifiers of network information that are not retransmitted are deleted and placeholder data that has the same length of the deleted service identifiers is added, the placeholder data being determined according to a specification of the information transmission apparatus, and

wherein a plurality of service list descriptors are appended to a transport stream identifier in accordance with the length of a said transport stream descriptor for identifying a new or previous transmission.

8. (Canceled)

9. (Previously Presented) An apparatus according to claim 7, wherein the network information replacement means includes:

network information extraction means for extracting the network information of the signal demodulated by the demodulation means,

network information conversion means for converting the network information extracted by the network information extraction means in compliance with a network to which the network information is to be retransmitted, and

network information reinsertion means for replacing the network information of the signal demodulated by the modulation means with the information for the first transmission path, using the network information converted by the network information conversion means as the information for the first transmission path.

10. (Previously Presented) An apparatus according to claim 9, wherein the first transmission path is a cable television channel, and the second transmission path is a satellite broadcasting channel.

11. (Previously Presented) An apparatus according to claim 10, wherein the network information replacement means extracts, from a signal from an arbitrary satellite system network among a plurality of satellite system networks, a network information item concerning the arbitrary satellite system network, and a network information item concerning another satellite system network, by means of the network information extraction means, converts respectively the network information items into network information items that comply with a network to which the network information items are to be retransmitted, and replaces the network information of the signal demodulated by the demodulation means with information for a cable, using the network information items converted by the network information conversion means as the information for the cable.

12. (Currently Amended) An information transmission method utilized by an information transmission apparatus for transmitting information through a first transmission path, said method comprising:

- a switching step of switching between a first terminal and a second terminal;
- a storing step of storing a NIT table of a transmission path to a first memory section and a second memory section, the first memory section and the second memory section being coupled with the first terminal and the second terminal respectively
- a receiving step of receiving a broadcasting signal from a second transmission path;
- a demodulation step of demodulating the signal received in the receiving step; and

a modulation step of modulating the signal demodulated by the demodulation step,

wherein when the second transmission path includes services of a plurality of satellites belonging to different networks, network information of the different networks is stored in different locations in a memory means,

wherein a table containing physical information of a transmission path is contained in the broadcasting signal and is distinguished by a unique table ID,

wherein the table is segmented into a plurality of sections with a same format, each section having a section indicator and a last section indicator,

wherein the modulation step includes a step of replacing network information demodulated by the demodulation step with information for the first transmission path,

wherein the information for the first transmission path includes a first delivery system descriptor and the network information includes a second delivery system descriptor,

wherein said first delivery system descriptor length and said second delivery system descriptor length are set in accordance with a transport stream descriptor length,

wherein NIT tables of transport streams are alternately stored in the first memory section and the second memory section~~wherein the first memory section is utilized for the first transmission path and the second memory section is utilized for the second transmission path,~~

wherein the switching step alternately outputs the NIT table stored the first memory section and the second memory section every transport packet by switching between the first terminal and the second terminal,

wherein service identifiers of network information that are not retransmitted are deleted and placeholder data that has the same length of the deleted service identifiers is added, the placeholder data being determined according to a specification of the information transmission apparatus, and

wherein a plurality of service list descriptors are appended to a transport stream identifier in accordance with the length of a said transport stream descriptor for identifying a new or previous transmission.

13. (Canceled)

14. (Previously Presented) A method according to claim 12, wherein the network information replacement step includes:

a network information extraction step of extracting the network information of the signal demodulated in the demodulation step,

a network information conversion step of converting the network information extracted in the network information extraction step so as to comply with a network to which the network information is to be retransmitted, and

a network information reinsertion step of replacing the network information of the signal demodulated in the modulation step with the information for the first transmission path, using the network information converted in the network information conversion step as the information for the first transmission path.

15. (Previously Presented) A method according to claim 12, wherein the first transmission path is a cable television channel, and the second transmission path is a satellite broadcasting channel.

16. (Previously Presented) A method according to claim 15, wherein in the network information replacement step, from a signal from an arbitrary satellite system network among a plurality of satellite system networks, a network information item concerning the arbitrary satellite system network and a network information item concerning another satellite system network are extracted,

in the network information conversion step, the network information items extracted in the network information extraction step are converted into network information items that comply with a network to which the network information items are to be retransmitted, and

in the network information reinsertion step, the network information of the signal demodulated in the demodulation step with information for a cable, using the network information items converted in the network information conversion step as the information for the cable.

17-18. (Canceled)